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VIA PRIORITY OVERNIGHT

Mr. Steven E. Kinser
Remedial Project Manager
Waste Management Division
U.S. Environmental Protection Agency - Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

**SUBJECT: Rose Chemicals Site
Long-Term Groundwater Monitoring
Sampling Event 1 Results**

Dear Mr. Kinser:

Clean Sites is pleased to submit results from the first long-term groundwater sampling event for the Rose Chemicals Site. We have attached: 1) a summary of June 1989 (RI) and the most recent results, 2) the data validation report, and 3) data validation tables. A brief summary of the sampling and results follows.

Field Activities

Groundwater samples were obtained during the period of July 11 through July 14 at the Site. Samples were collected and analyzed according to the procedures contained in the Ground Water Monitoring Program (Section 8.4 of the Final Remedial Design Document). Burns & McDonnell Waste Consultants, Inc. (B&MWCI) collected the samples.

There are fifteen shallow and eight deep monitoring wells in the monitoring network. Each well was to be sampled for volatile organic compounds (VOC), filtered PCBs, and unfiltered PCBs. During the sampling, MW-204 and MW-208 were dry; therefore, no samples were collected. At MW-201 and MW-104, not enough water was available to collect the unfiltered PCB sample; however, VOCs and filtered PCBs were obtained.

Analytical

Analytical data from this sampling event have been summarized in Attachment 1. American Technical & Analytical Services, Inc. analyzed

Site: Martha Rose Chem.
ID #: MO1980633069
Break: 7.3
Other: Clean Sites
9-21-95



40025265
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1199 North Fairfax Street, Suite 400
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Fax (703) 548-8773

the samples according to CLP protocol and methods (OLMO 3.1). These methods comprise EPA Method 624 (VOC) and EPA Method 608 (PCB). B&MWCI provided the data validation in accordance with the National Functional Guidelines. The data validation report and summary tables are included as Attachments 2 and 3, respectively.

There are 33 VOCs and 7 PCBs analyzed in each scan. Only those compounds that were detected have been included in the summary table. Results from the third round of the RI (collected in June 1989) are included for comparison.

Results

No PCBs were detected above the contract required detection limit (CRDL, typically 1 $\mu\text{g/l}$) in any of the samples. Aroclor 1260 was estimated at a concentration of 0.12 $\mu\text{g/l}$ in the filtered sample for MW-201 (the unfiltered sample was not collected) and 0.24 $\mu\text{g/l}$ in the unfiltered sample at MW-207R (undetected in the filtered sample).

Methylene chloride, a common laboratory contaminant, was detected in 13 of the 21 wells sampled. Nine of the detections were below the CRDL. Eleven of these detections were qualified as blank contamination. Methylene chloride was detected once during Round 3 of the RI in MW-102 which is not part of the monitoring network. Acetone, another common laboratory contaminant, was detected in two wells at concentrations very close to the CRDL. Acetone was detected once during Round 3 of the RI in MW-106 which is not part of the monitoring network.

Aside from methylene chloride and acetone, only two wells showed detections of other VOCs; MW-201 and MW-210. At MW-201, 1,2-dichloroethene and trichloroethene were present at concentrations of 44 $\mu\text{g/l}$ and 620 $\mu\text{g/l}$, respectively. These concentrations are approximately half of what they were in 1989. At MW-210, the following contaminants were detected: 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, and xylene. For those compounds detected during the RI, contaminant concentrations are less by more than one order of magnitude. Both of these wells have demonstrated a significant decrease in contaminant concentrations over the past six years.

Mr. Steven E. Kinser
September 21, 1995
Page 3

We are tentatively planning the second sampling event for the week of October 2. Validated results for the second event should be forwarded to USEPA in November. After you have reviewed this data, we would like to discuss the scope of future sampling events and the monitoring program as a whole. If you have any questions, please call Robin Robinson at (415) 561-5917 or myself at (703) 739-1279.

Sincerely,



Douglas E. McClure, P.E.
Project Engineer

/proj/tar/rose/gw.monitor/kinser950912

attachments

cc: Rose Chemicals Technical Committee
R. Redden, MDNR
S. Zabel, SH&W
R. Robinson, CSI
E. Fitzpatrick, CSI

ATTACHMENT 1

ROSE CHEMICALS SITE
LONG-TERM GROUNDWATER MONITORING
EVENT 1 (July 1995)

Shallow Monitoring Wells

Compound	MW-201 Jun 89	MW-201 Jul 95	MW-202 Jun 89	MW-202 Jul 95	MW-203 Jun 89	MW-203 Jul 95	MW-204 Jun 89	MW-204 Jul 95	MW-205 Jun 89	MW-205 Jul 95	MW-206 Jun 89	MW-206 Jul 95	MW-207 Jun 89	MW-207R Jul 95
Acetone	ND	10 U	ND	10 U	ND	10 U	ND	NA	ND	11	ND	10 U	ND	10 U
1,1-Dichloroethene	ND	10 U	ND	10 U	ND	10 U	ND	NA	ND	10 U	ND	10 U	ND	10 U
1,1-Dichloroethane	ND	10 U	ND	10 U	ND	10 U	ND	NA	ND	10 U	ND	10 U	ND	10 U
1,2-Dichloroethene (total)	94	44	ND	10 U	14	10 U	9200	NA	ND	10 U	ND	10 U	ND	10 U
trans-1,3-Dichloropropene	ND	10 U	ND	10 U	ND	10 U	2400	NA	ND	10 U	ND	10 U	ND	10 U
Ethylbenzene	ND	10 U	ND	10 U	ND	10 U	1800	NA	ND	10 U	ND	10 U	ND	10 U
Methylene chloride	ND	10 U	ND	5 JT*	ND	10 U	ND	NA	ND	4 JBU*	ND	8 JT*	ND	10 U
1,1,1-Trichloroethane	ND	10 U	ND	10 U	ND	10 U	ND	NA	ND	10 U	ND	10 U	ND	10 U
Trichloroethene	1100	620 D	ND	10 U	5	10 U	2200	NA	ND	10 U	ND	10 U	ND	10 U
Tetrachloroethene	ND	10 U	ND	10 U	ND	10 U	1400	NA	ND	10 U	ND	10 U	ND	10 U
Toluene	ND	10 U	ND	10 U	ND	10 U	12000	NA	ND	10 U	ND	10 U	ND	10 U
Trichloromethane	6	10 U	ND	10 U	ND	10 U	ND	NA	ND	10 U	ND	10 U	ND	10 U
Xylenes (total)	ND	10 U	ND	10 U	ND	10 U	30000	NA	ND	10 U	ND	10 U	ND	10 U
Aroclor-1242 (unfiltered)	ND	1.0 U	ND	1.0 U	ND	1.0 U	ND	NA	ND	1.0 U	ND	1.0 UJ*	12.9	1.0 UJ*
Aroclor-1260 (filtered)	ND	0.12 J	ND	1.0 U	ND	1.0 U	ND	NA	ND	1.0 U	ND	1.0 U	ND	1.0 UR*
Aroclor-1260 (unfiltered)	ND	NA	ND	1.0 U	ND	1.0 U	1.3 a	NA	ND	1.0 U	ND	1.0 UJ*	9.6 a	0.24 J

Shallow Monitoring Wells

Compound	MW-208 Jun 89	MW-208 Jul 95	MW-209 Jun 89	MW-209 Jul 95	MW-210 Jun 89	MW-210 Jul 95	MW-211 Jun 89	MW-211 Jul 95	MW-212 Jul 95	MW-213 Jul 95	MW-214 Jul 95	MW-215 Jul 95
Acetone	ND	NA	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	ND	NA	ND	10 U	2500	230 D	ND	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	ND	NA	ND	10 U	ND	27	ND	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	ND	NA	ND	10 U	ND	46	40	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	ND	NA	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	ND	NA	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Methylene chloride	ND	NA	ND	11 BT*	ND	4 J	ND	120 T*	5 JT*	5 JT*	10 U	10 U
1,1,1-Trichloroethane	ND	NA	ND	10 U	3100	190	ND	10 U	10 U	10 U	10 U	10 U
Trichloroethene	ND	NA	ND	10 U	ND	25	180	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	ND	NA	ND	10 U	8000	680 D	ND	10 U	10 U	10 U	10 U	10 U
Toluene	ND	NA	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Trichloromethane	ND	NA	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	ND	NA	ND	10 U	ND	3 J	ND	10 U	10 U	10 U	10 U	10 U
Aroclor-1242 (unfiltered)	ND	NA	ND	1.0 U	ND	1.0 U	ND	1.0 U	1.0 UJ*	1.0 U	1.0 U	1.0 U
Aroclor-1260 (filtered)	ND	NA	ND	1.0 U	ND	1.0 U	ND	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260 (unfiltered)	ND	NA	ND	1.0 U	ND	1.0 U	ND	1.0 U	1.0 UJ*	1.0 U	1.0 U	1.0 U

ROSE CHEMICALS SITE
LONG-TERM GROUNDWATER MONITORING
EVENT 1 (July 1995)

Deep Monitoring Wells

Compound	MW-103 Jun 89	MW-103 Jul 95	MW-104 Jun 89	MW-104 Jul 95	MW-108 Jun 89	MW-108 Jul 95	MW-111 Jun 89	MW-111 Jul 95	MW-112 Jul 95	MW-113 Jul 95	MW-114 Jul 95	MW-115 Jul 95
Acetone	ND	10 U	ND	10 U	ND	22	ND	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	ND	10 U	ND	10 U	14	10 U	ND	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Methylene chloride	ND	10 U	ND	11 BT*	ND	5 JT*	ND	10 U	110	6 JT*	10 U	5 JT*
1,1,1-Trichloroethane	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Trichloroethene	ND	10 U	ND	10 U	6	10 U	ND	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Toluene	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Trichloromethane	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Xylenes (total)	ND	10 U	ND	10 U	ND	10 U	ND	10 U	10 U	10 U	10 U	10 U
Aroclor-1242 (unfiltered)	ND	1.0 U	ND	1.0 U	ND	1.0 UJ*	ND	1.0 UJ*	1.0 UR*	1.0 UR*	1.6 UJ*	1.0 U
Aroclor-1260 (filtered)	ND	1.0 U	ND	1.0 U	ND	1.0 U	ND	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ*
Aroclor-1260 (unfiltered)	ND	1.0 U	ND	NA	ND	1.0 UJ*	ND	1.0 UJ*	1.0 UR*	1.0 UR*	1.6 UJ*	1.0 U

Notes

All concentrations are reported in ug/l (ppb)
Only those compounds detected are shown
a - Aroclor 1254/1260
NA - Not analyzed

Laboratory qualifiers

J - Estimated value below detection limit
D - Result obtained from dilution
B - Analyte detected in method blank
U - Undetected at reported quantitation limit

Data Validation qualifiers

T* - Analyte detected in trip blank
U* - Undetected based on QC evaluation
R* - Unusable based on QC evaluation
J* - Estimated based on QC evaluation

Values in BOLD exceed Federal MCLs (40CFR141.61)

Compound	MCL (ug/l)
PCBs	0.5
Trichloroethene	5
1,2-Dichloroethene*	70
Ethylbenzene	700
Tetrachloroethene	5
Toluene	1000
Xylene	10000
1,1-Dichloroethene	7
1,1,1-Trichloroethane	200

* MCL exists for cis- isomer only

ATTACHMENT 2

Burns	Waste
&	Consultants,
McDonnell	Inc.

MEMORANDUM

Date: August 8, 1995

To: Rich Mannz

From: Christine Rice
Yvonne Huff
Tom Brown

Re: QA/QC Review of Analytical Data
Project No. 95-263-4 (ATASROSE)

Groundwater samples were collected on July 11 through 14, 1995. American Technical & Analytical Services, Inc. (ATAS) of Maryland Heights, Missouri, analyzed the samples for volatile organic compounds (VOCs) and filtered and unfiltered polychlorinated biphenyls (PCBs) by following USEPA's Contract Laboratory Program Statement of Work (OLM03.0).

The sample results were evaluated using the attached Level III checklists. The checklist items were reviewed as recommended by *National Functional Guidelines for Organic Data Review* (NFGO), USEPA 1993. Checklist items meeting the criteria in these guidelines are not discussed in this memo. The quality assurance/quality control (QA/QC) review results requiring explanation are discussed below.

1. Holding Times-Field Samples MW-115 and MW-112 were re-extracted outside the protocol holding times due to low surrogate recoveries. Sample MW-104 was re-extracted outside of holding time due to PCB contamination. These PCB samples were qualified as estimated (J*).
2. Method Blank-VOC method Blanks VBLKCS and VBLKCS contained positive detections of methylene chloride. Any positive methylene chloride detections in the associated samples were qualified as undetected (U*) if they were less than 10 times the method blank concentrations. The following associated samples required this qualification: TB-1, D-1 and MW-205.

Aroclor-1260 was detected in unfiltered PCB method Blank PBLK5D. Sample D-2 contained a positive detection of Aroclor-1260 that was less than five times the method blank concentration; hence, this detection was qualified as undetected (U*).

3. Trip Blanks-Methylene chloride was detected in Trip Blanks TB-2 and TB-4. The following associated samples had methylene chloride detections "T" qualified: MW-108, MW-113, MW-115, MW-213, MW-211, MW-112, MW-212, D-2DL, MW-104, MW-209, MW-210, MW-206, and MW-202. Acetone was also detected in Trip Blank TB-2, however, no acetone detections were found in the associated samples.

4. Surrogate Recoveries-The surrogate TCX for the filtered PCB analysis of Sample MW-207F had a percent recovery (REC) of 2 percent. This is below the 10 percent NFGO minimum. As recommended by the NFGO, all positive PCB results in this sample were qualified as estimated (J*) and all undetected PCB results in this sample were qualified as unusable (R).

Filtered PCB Sample MW-115F had a DCB surrogate REC of 20 percent, which was less than the QC minimum of 30 percent. All positive and undetected results in this sample were qualified as estimated (J*).

The surrogate DCB for the unfiltered PCB analysis of Sample MW-113 had an REC of 8 percent, which fell below the NFGO 10 percent minimum. Accordingly, all positive detections of this sample were qualified as estimated (J*) and all undetected results of this sample were qualified as unusable (R).

Unfiltered PCB Sample MW-115 had TCX and DCB surrogate RECs of 8 and 3 percent, respectively, which were less than the NFGO 10 percent minimum. As recommended by the NFGO, all positive detections of this sample were qualified as estimated (J*) and all undetected results of this sample were qualified as unusable (R). This sample was reanalyzed (MW-115RE). The DCB surrogate REC for the reanalysis was 20 percent, which was less than the QC minimum of 30 percent but greater than 10 percent. Therefore, all positive and undetected results in Sample MW-115RE were qualified as estimated (J*). This indicated that the low REC in the original analysis resulted from laboratory error and not matrix effect.

The DCB surrogate REC for unfiltered PCB Sample MW-112 was 5 percent. This fell below 10 percent; hence, in accordance to the NFGO, all positive detections were qualified as estimated (J*) and all undetected results were qualified as unusable (R). This sample was reanalyzed (MW-112RE) and the DCB REC (9 percent) was again below 10 percent. The positive results of this reanalysis were qualified as estimated (J*) and the undetected results were qualified as unusable (R). The low surrogate REC of the reanalysis confirmed that sample matrix interferences were occurring.

The DCB surrogate RECs of the following unfiltered PCB Samples MW-207 (14 percent), MW-114 (29 percent), MW-108 (26 percent), MW-206 (16 percent), D-1 (26 percent), MW-111 (26 percent), and MW-212 (24 percent) were below the QC minimum of 30 percent. All positive and undetected unfiltered PCB results in these samples were qualified as estimated (J*).

These surrogate results indicate that some sample matrix interference was present in various PCB samples. Although not required by OLM03.0, ATAS chose to reanalyze Samples MW-115 and MW-112. The reanalysis of

MW-112 confirmed the matrix interference effect for that sample. Other samples whose surrogates were below the NFGO 10 percent minimum were not reanalyzed. Therefore, it is possible that analytical procedures beyond OLM03.0 could have confirmed that sample matrix interference was present in these samples with low surrogate RECs. The application of such procedures is out of the scope of the existing contract. In addition, given the overall absence of PCB contamination in the groundwater, it is WCI's judgement that the performance of additional testing would add little additional validity to this round's findings of no detectable PCBs in the site groundwater.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) for Organics-The filtered PCB MS/MSD analysis on Sample MW-205 was associated with samples of sample delivery group (SDG) 71295F. The MS RECs for gamma-BHC (53 percent) and endrin (55 percent) were below the QC minimum of 56 percent. Parameters that did not meet the relative percent difference (RPD) QC guidelines are listed below.

<u>Parameter</u>	<u>RPD</u>	<u>RPD QC Limits</u>
gamma-BHC	42%	15%
Heptachlor	37%	20%
Aldrin	43%	22%
Dieldrin	45%	18%
Endrin	44%	21%
4,4'-DDT	50%	27%

6. Field Duplicates-Two sets of field duplicates were collected during these sampling events. There are no specific EPA guidelines for qualifying data from field duplicate results. For the purpose of this QC evaluation, WCI has applied the QC limits for the inorganic duplicate analyses, found in *National Functional Guidelines for Inorganic Data Review* (NFGI), USEPA 1994, to the duplicates:

- Was the same compound detected in both samples?
- For an analyte where both the results were greater than five times its quantitation limit, was the RPD less than 20 percent for water samples?
- For analytes where at least one of the results was less than five times its quantitation limit, were the results within plus or minus (\pm) the quantitation limit of each other?

The following positive detections were found.

Field Duplicate Pair MW-206//D-1:

<u>Parameter</u>	<u>MW-206</u>	<u>D-1</u>	<u>Meets QC Criteria</u>
Filtered PCBs			
Aroclor-1260	1 µg/L U	0.14 µg/L J	Yes
VOCs			
Methylene chloride	8 µg/L JT	5 µg/L JBU*	Yes

Field Duplicate Pair MW-211//D-2:

<u>Parameter</u>	<u>MW-211</u>	<u>D-2</u>	<u>Meets QC Criteria</u>
VOCs			
Methylene chloride	120 µg/L T	10 µg/L U	No
1,2-Dichloroethene (total)	27 µg/L	10 µg/L U	No

The majority of the non-detects were replicated. The methylene chloride and 1,2-dichloroethene (total) detections found in Sample MW-211 were not replicated in Sample D-2. Other positive detections were replicated and met WCI's QC criteria.

7. Quantitation Limits-The VOC Samples MW-210DL and D-2DL required dilutions (dilution factors of 10 and 5, respectively) to bring high concentrations of target analytes into the instruments' calibration ranges.
8. Conclusion-Unfiltered PCB undetected results of Samples MW-113, MW-115, MW-112, and MW-112RE and filtered PCB undetected results of Sample MW-207F were qualified as unusable (R) due to poor surrogate recovery. With these exceptions, the results of the data review indicate that the data are valid for use (as qualified) in reporting the results of this investigation.

Attachments

ATTACHMENT 3

WELL ID:	MW-108	MW-115	MW-201	MW-113	MW-201DL	MW-213	D-1
LAB ID:	13517.04	13517.05	13503.03	13517.02	13503.03DL	13517.03	13481.06
Date Received:	07/17/95	07/17/95	07/14/95	07/17/95	07/14/95	07/17/95	07/13/95
Date Analyzed:	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/14/95
Dilution Factor	1.0	1.0	1.0	1.0	10.0	1.0	1.0

CONCENTRATION UNITS:

UG/L

Chloromethane	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5 J (T)	5 J (T)	ND	6 J (T)	ND	5 J (T)	5 JB (U*)
Acetone	22	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	ND	ND	44	ND	39 JD	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	620 E	ND	620 D	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	ND	ND	ND	ND	ND	ND	ND

WELL ID:	MW104	MW202	MW205	TB-1	TB-4	MW206	MW209
LAB ID:	13481.02	13481.07	13476.02	13476.01	13517.01	13481.05	13481.03
Date Received:	07/13/95	07/12/95	07/12/95	07/12/95	07/17/95	07/12/95	07/13/95
Date Analyzed:	07/14/95	07/19/95	07/14/95	07/14/95	07/20/95	07/19/95	07/14/95
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Chloromethane	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	11 B (T)	5 J (T)	4 JB (U*)	3 JB (U*)	6 J	8 J (T)	11 B (T)
Acetone	ND	ND	11	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	ND	ND	ND	ND	ND	ND	ND

WELL ID:	MW210	MW210DL	TB-2	D-2	D-2DL	MW-112	MW-211
LAB ID:	13481.04	13481.04DL	13481.01	13518.04	13518.04DL	13518.07	13518.06
Date Received:	07/13/95	07/12/95	07/13/95	07/17/95	07/17/95	07/17/95	07/17/95
Date Analyzed:	07/19/95	07/19/95	07/14/95	07/21/95	07/21/95	07/21/95	07/21/95
Dilution Factor	1.0	10.0	1.0	1.0	5.0	1.0	1.0

CONCENTRATION UNITS:

UG/L

Chloromethane	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	4 J	ND	15 B	ND	30 JD (T)	110	120 (T)
Acetone	ND	ND	10	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	330 E	230 D	ND	ND	ND	ND	ND
1,1-Dichloroethane	27	20 JD	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	46	38 JD	ND	27	24 JD	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	190	140 D	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	25	17 JD	ND	460 E	370 D	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	960 E	680 D	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	3 J	ND	ND	ND	ND	ND	ND

WELL ID:	MW-212	MW-103	MW-111	MW-203	MW-215	MW-114	MW-207
LAB ID:	13518.08	13518.02	13518.05	13518.03	13518.01	13503.04	13503.02
Date Received:	07/17/95	07/17/95	07/17/95	07/17/95	07/17/95	07/14/95	07/14/95
Date Analyzed:	07/21/95	07/21/95	07/21/95	07/21/95	07/21/95	07/20/95	07/20/95
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:

UG/L

Chloromethane	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5 J (T)	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND
Xylene (Total)	ND	ND	ND	ND	ND	ND	ND

WELL ID:	MW-214	TB-3
LAB ID:	13503.05	13503.01
Date Received:	07/14/95	07/14/95
Date Analyzed:	07/20/95	07/20/95
Dilution Factor	1.0	1.0

CONCENTRATION UNITS:

UG/L

Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl Chloride	ND	ND
Chloroethane	ND	ND
Methylene Chloride	ND	ND
Acetone	ND	ND
Carbon Disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	ND	ND
1,2-Dichloroethane	ND	ND
2-Butanone	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-Pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Toluene	ND	ND
Chlorobenzene	ND	ND
Ethylbenzene	ND	ND
Styrene	ND	ND
Xylene (Total)	ND	ND

BURNS & McDONNELL QUALIFIERS:

(T) - ANALYTE DETECTED IN TRIP BLANK AS WELL AS SAMPLE

(U*) - QUALIFIED AS UNDETECTED FROM QC EVALUATION

(R) - QUALIFIED AS UNUSABLE FROM QC EVALUATION

(J*) - QUALIFIED AS ESTIMATED FROM QC EVALUATION

EPA CLP QUALIFIERS:

B - ANALYTE DETECTED IN METHOD BLANK AS WELL AS SAMPLE

J - ESTIMATED VALUE BELOW DETECTION LIMIT

E - EXCEEDED LINEAR RANGE; DILUTION REQUIRED

D - DILUTION

ND - NOT DETECTED - THIS WAS USED IN PLACE OF THE U QUALIFIER

USED BY THE EPA CLP TO INDICATE NOT DETECTED
ABOVE THE QUANTITATION LIMIT

WELL ID:	MW201F	D-2	D-1F	MW207	MW205	MW205F	MW209
LAB ID:	13503.07	13518.04	13481.14	13503.02	13476.02	13476.05	13481.03
Date Received:	07/14/95	07/15/95	07/13/95	07/14/95	07/12/95	07/12/95	07/13/95
Date Extracted:	07/17/95	07/18/95	07/14/95	07/17/95	07/14/95	07/14/95	07/14/95
Date Analyzed:	07/19/95	07/20/95	07/18/95	07/19/95	07/18/95	07/18/95	07/18/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1221	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1232	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1242	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1248	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1254	ND	ND	ND	ND (J*)	ND	ND	ND
Aroclor-1260	0.12 J	0.20 BJ (U*)	0.14 J	0.24 J (J*)	ND	ND	ND

WELL ID:	MW210	MW206	D-1	MW202	MW104F	MW209F	MW210F
LAB ID:	13481.04	13481.05	13481.06	13481.07	13481.10	13481.11	13481.12
Date Received:	07/13/95	07/13/95	07/13/95	07/13/95	07/13/95	07/13/95	07/13/95
Date Extracted:	07/14/95	07/14/95	07/14/95	07/14/95	07/14/95	07/14/95	07/14/95
Date Analyzed:	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1221	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1232	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1242	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1248	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1254	ND	ND (J*)	ND (J*)	ND	ND	ND	ND
Aroclor-1260	ND	ND (J*)	ND (J*)	ND	ND	ND	ND

WELL ID:	MW206F	MW202F	MW114	MW214	MW207F	MW114F	MW214F
LAB ID:	13481.13	13481.15	13503.04	13503.05	13503.06	13503.08	13503.09
Date Received:	07/13/95	07/13/95	07/14/95	07/14/95	07/14/95	07/14/95	07/14/95
Date Extracted:	07/14/95	07/14/95	07/17/95	07/17/95	07/17/95	07/17/95	07/17/95
Date Analyzed:	07/18/95	07/18/95	07/19/95	07/19/95	07/19/95	07/19/95	07/19/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1221	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1232	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1242	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1248	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1254	ND	ND	ND (J*)	ND	ND (R)	ND	ND
Aroclor-1260	ND	ND	ND (J*)	ND	ND (R)	ND	ND

WELL ID:	MW113	MW213	MW108	MW115	MW113F	MW213F	MW108F
LAB ID:	13517.02	13517.03	13517.04	13517.05	13517.06	13517.07	13517.08
Date Received:	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95
Date Extracted:	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95
Date Analyzed:	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1221	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1232	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1242	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1248	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1254	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND
Aroclor-1260	ND (R)	ND	ND (J*)	ND (R)	ND	ND	ND

WELL ID:	MW115F	MW215	MW103	MW203	MW111	MW211	MW112
LAB ID:	13517.09	13518.01	13518.02	13518.03	13518.05	13518.06	13518.07
Date Received:	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95
Date Extracted:	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95
Date Analyzed:	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95	07/20/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1221	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1232	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1242	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1248	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1254	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)
Aroclor-1260	ND (J*)	ND	ND	ND	ND (J*)	ND	ND (R)

WELL ID:	MW212	MW215F	MW103F	MW203F	D-2F	MW111F	MW211F
LAB ID:	13518.08	13518.09	13518.10	13518.11	13518.12	13518.13	13518.14
Date Received:	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95	07/15/95
Date Extracted	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95	07/18/95
Date Analyzed:	07/20/95	07/20/95	07/20/95	07/21/95	07/21/95	07/21/95	07/21/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1221	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1232	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1242	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1248	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1254	ND (J*)	ND	ND	ND	ND	ND	ND
Aroclor-1260	ND (J*)	ND	ND	ND	ND	ND	ND

WELL ID:	MW112F	MW212F	MW104RE	MW115RE	MW112RE
LAB ID:	13518.15	13518.16	13481.02	13517.05	13518.07
Date Received:	07/15/95	07/15/95	07/13/95	7/15/95	07/15/95
Date Extracted	07/18/95	07/18/95	07/20/95	07/25/95	07/25/95
Date Analyzed:	07/21/95	07/21/95	07/21/95	07/25/95	07/25/95
Dilution Factor:	1.0	1.0	1.0	1.0	1.0

CONCENTRATION UNITS:
UG/L

Aroclor-1016	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1221	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1232	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1242	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1248	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1254	ND	ND	ND (J*)	ND (J*)	ND (R)
Aroclor-1260	ND	ND	ND (J*)	ND (J*)	ND (R)

BURNS & McDONNELL QUALIFIERS:

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(U*) - QUALIFIED AS UNDETECTED FROM QC EVALUATION

(R) - QUALIFIED AS UNUSABLE FROM QC EVALUATION

(J*) - QUALIFIED AS ESTIMATED FROM QC EVALUATION

EPA CLP QUALIFIERS:

B - ANALYTE DETECTED IN METHOD BLANK AS WELL AS SAMPLE

J - ESTIMATED VALUE BELOW DETECTION LIMIT

ND - NOT DETECTED - THIS WAS USED IN PLACE OF THE U QUALIFIER
USED BY THE EPA CLP TO INDICATE NOT DETECTED
ABOVE THE QUANTITATION LIMIT